

Case Study: Food Waste Diversion in CalEPA Headquarters

BACKGROUND

The California Environmental Protection Agency develops, implements, and enforces the State's environmental laws, and is the umbrella agency over CalRecycle, the department responsible for waste recycling and reduction. CalEPA established a food waste recycling program in its headquarters location to divert more of its waste stream, and create a model for other state agencies that will be required to create similar programs over a five year period as a result of [AB 1826](#). AB 1826 requires businesses that meet a specified waste threshold to recycle organic materials starting April 2016.

Historically, at 18 percent of the total, food has been the largest waste stream going into California's landfills. As the organic material breaks down in landfills, millions of tons of greenhouse gases are released into the environment each year. Recycling organic materials will not only reduce GHG emissions that occur when food and other organic materials decay in landfills, but it will create a demand for new composting and anaerobic digestion infrastructure, and create new jobs.

BUILDING STATISTICS

The CalEPA headquarters building is located at 1001 I Street in Sacramento. It has nearly 1 million square feet and 25 floors of office space, with break rooms on every open hallway, and one or two break rooms located on each floor in the internal office spaces. The building is leased from the city of Sacramento, employs a professional building management, engineering, security, and janitorial team, and houses CalEPA and its boards, departments and office staff. Building occupants also include a café and a daycare.

PROGRAM GOALS

The food waste program was designed to remove as much food waste as possible from the building's waste stream, including waste from the café food production and daycare operations, while remaining cost neutral or very low cost. Secondary goals aimed to increase education on the benefits of removing food from the waste stream, and encourage widespread acceptance of the program among staff.

PRE-LAUNCH PLANNING

CalEPA's recycling coordinator met with CalRecycle staff to evaluate the feasibility of a food waste program in the building. They took the following steps:

- Discussed with CalEPA Assistant Secretary for Fiscal and Administrative Programs to secure permission to move forward with an attempt to establish food waste diversion
- Surveyed staff interest and willingness to participate in possible food waste recycling program during 2013 America Recycles Day Fair and Expo
- Researched and identified potential receivers of food waste
- Met with building management to discuss logistics concerning how and where food waste could be stored before hauling

- Requested a waste characterization study from hauler to identify potential for food waste capture
- Conducted cost-benefit analysis on separation and delivery of food waste
- Selected a facility to take the material to, CleanWorld anaerobic digestion facility, because of its close proximity to CalEPA headquarters in Sacramento
- Negotiated free pick-up and delivery with hauler during pilot trial period of program
- Selected recycled content food waste bins and plastic bags
- Worked with janitorial staff to arrange training and pick-up schedule during pilot
- Met with CalEPA Secretary and senior staff to gain buy-in before launching the pilot
- Developed branding and educational pieces to educate building staff of new program

PILOT LAUNCH

The CalEPA/CalRecycle food waste committee launched its pilot food collection program in April 2014. Bins were placed in the two largest hallway break rooms on the 5th and 19th floors, the main lobby, in the child care center, and in the cafe (both behind the counter and in the seating area). In May, the pilot expanded to include the 13th floor.

- Signage was placed near elevators and in break rooms and at the locations of all the food waste bins and garbage cans.
- All-building emails reminded staff of how and what to recycle
- At the beginning of the pilot, committee members sat in the lobby to answer questions about the program
- Committee members and dock staff assisted janitors with the weighing and recording of food waste collection
- Janitors collected food waste two times per day and delivered to two 64 containers on the dock. (During break room pickup, trash, recycling and food waste is separated into its own bag, and removed on a rolling bin.)
- Republic Services Waste Haulers picked up the large dock containers for delivery to CleanWorld Partners one or two times per week.

PROGRAM EXPANSION

In July 2014, the food waste pilot ended, and food waste collection became a permanent part of building recycling activities. Due to a backorder on the food collection containers selected, the program initially expanded to all hallway break rooms, but not internal break rooms. The food collection container was removed from the lobby. Janitors continued to collect food waste from each hallway break room, the café, and child care center two times per day.

FULL IMPLEMENTATION

In January 2015, the food waste collection program expanded from hallway break rooms to also include internal office break rooms. Every break room with a refrigerator now has a food waste container, and

food waste collection containers are still available in the cafe and the childcare center. Measurement and statistics are taken two times, for two weeks, each year. With full expansion, CalEPA began paying for three 64 gallon dock containers to be hauled two times per week to CleanWorld.

STATISTICS

Pilot April – June 2014	Initial Launch July – December 2014	Full building-wide launch January 2015	Full building-wide launch July 2015
297 lbs./week	316 lbs./week	589 lbs./week	621 lbs./week

It is clear from the statistics that convenience is a major factor in the success of a food waste recycling program. Even highly motivated and environmentally conscious employees are less likely to participate if more effort is required (carrying food waste to a remotely located recycle bin). By increasing collection points, CalEPA was able to double its food waste totals. Ongoing education, such as signage, emails, and outreach at America Recycles Day and Earth Day events encourage continued participation.

COST

Three 64 gallon food waste containers hauled two times per week costs \$93.77 per month, or \$1,125.24 per year. The cost is split by CalEPA and its six boards, departments and offices based on the square footage each department occupies within the building. The larger departments pay a larger share of cost. Break room bins (1.9 gallon capacity) cost \$16.50 per bin. Building management purchased 65 bins for a one-time cost of \$1,950. Plastic liner bags cost approximately \$27 /month. Janitorial staff worked the collection into their normal building rounds at no additional cost.

QUESTIONS AND CONSIDERATIONS

The food waste program at 1001 I Street was relatively easy to implement due to single agency building occupancy and high buy-in of CalEPA staff. The building was fortunate to have a biodigester close by to accept food waste, and a hauler willing to negotiate terms during the pilot stage. The following are first steps and questions to consider when implementing AB 1826.

First Steps

- Engage department heads/administrators so they are aware it’s the law! Program must be in place by April 2016 (or within the following five years) depending upon agency size and waste generated
- Engage building management and educate on timeline requirement
- Investigate costs of materials and hauling
- Engage janitorial staff through property management to ensure bin placement is convenient to normal rounds
- Communicate with staff to increase participation
- Be prepared for pushback with solutions regarding smells or insects

Questions to Consider

- Is your building state-owned (DGS) or leased?
- Who is the property manager of your building?
- Are there multiple agencies or private entities in the same building?
- If there are multiple entities, can you engage all to participate in food waste program?
- Who are proper contacts within each agency?
- Who is your contact with existing hauling service?
- Does your hauler have an established relationship with composting/food recycling operation
- How close is the nearest food collection facility?
- How receptive will your building occupants be to a composting/collection program?